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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,490	12/05/2003	Gregory A. Dougherty SR.	VORT-001/01US	7243

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COOLEY GODWARD LLP  
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EXAMINER
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SOOHOO, TONY GLEN

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/727,490

Applicant(s)

DOUGHERTY ET AL.

Examiner

Tony G. Soohoo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 16-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 Oct 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner. TGS 1123
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date two sheets.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, claims 1-15 and 32-24 in the reply filed on 10-26-2005 is acknowledged.
2. Claims 16-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10-26-2005.

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the stop of claim 34, and the adjustment mechanism of claims 8, and 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 8, 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification fails to adequately teach the connective structural elements in connection with the corkscrew in order to teach how to make the mechanism for adjustment as claimed.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 3-4, 8, 9, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 fails to provide antecedent basis for "the outer barrel".

Claim 8 fails to provide antecedent basis for "the extension".

Claim 9 fails to provide antecedent basis for "the inlet plate".

Claims 8 and 11 are narrative to the operation of the corkscrew deflector and fails to positively claim any positive structure to permit the recited operation of "adjustable" thus the claim is denied any further patentable limitation and distinction to the deflector structure, whereby one may easily operate to bend any screw structure or rebuild any deflector to a new "adjusted" position, or may simply rotate the angle of orientation of the screw deflector about the outer barrel thereby presenting a corkscrew deflector with a new adjusted orientation about the inner barrel.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-9, 11-15, 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Lichtenthaeler 1496345.

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With regards to the inlet plate, note that plate 23 may be deemed as the inlet plate forming an aperture at the end of the inner barrel 12, and having a stop 24 about 25 which positions the inner barrel 12 to the outer barrel and sleeve 12, 13, and side inlet and side outlet smaller ends at top of 13 and 14.

10. Claims 1-9, 11-12, 14-15, 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by King 6027241, especially figures 4 and 5.

With regards to the inlet plate, note that plate 39 may be deemed as the inlet plate forming an aperture at the end of the inner barrel 12, and having a stop face at the interface of the screw 51 and the end of 39, see figure 5, which positions the inner barrel 38 to the outer barrel and sleeve 10, and side inlet at the right bottom of figure 4.

11. Claims 1-3, 7-9, 11-15, 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Warren 1626487.

With regards to the inlet plate, note that plate 23 may be deemed as the inlet plate with an aperture 21, 28 at the end of the inner barrel 32, , and having a stop 24 about 25 which positions the inner barrel 32 to the outer barrel 1 and sleeve 7, 6, and side inlet 35, 18, 19, 20, and smaller end at 4, 5, whereby the outer barrel at the immediate left 6 is the substantially the same diameter at the immediate right of 6 in connection to one another.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtenthaeler 1496345, or alternately Warren 1626487, or alternately King 6027241.

Each of the references, Lichtenthaeler 1496345, or alternately Warren 1626487 discloses all of the recited subject matter as defined within the scope of the claims with the exception of the angle of the deflector to the inlet plate being of the angle of exactly 70 degrees. However each of the references discloses a screw with an angle in relation to the inlet plate.

The angle of the screw, or pitch is a commonly known effective variable in the art of static mixer element whereby the pitch angle may provide a desired amount of kinetic rotative energy for agitation. Since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, ( *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) ), it is deemed that it would have been obvious to one of ordinary skill in the art to modify either the reference to Lichtenthaeler 1496345 or alternately Warren 1626487, or alternately King 6027241 with a screw pitch angle to the inlet plate of the value of 70 degrees in order to optimize the flow rotation for mixing.

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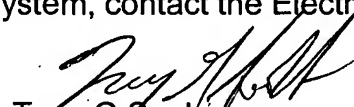
**Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Knox 3223388, Isaacs et al 835619, Belt 1893484, Hooker 2000953, Pahl et al 2784948, Manka 2831754, Larson 4034964, Gussefeld 4053141, Smith 4088449, Barbini 4111402, Bretz 4197092, Bowden 4321963, Forsmand 4371036, Hashimoto et al 4884894, especially figures 28 and 29, Bader 4893672, Zhi-qiang et al 5399015, King 6102561.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G. Soohoo whose telephone number is (571) 272 1147. The examiner can normally be reached on 7-5PM, Tue-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tony G Soohoo  
Primary Examiner  
Art Unit 1723

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